

ABSTRACT

Methods for passivating stainless steel after acid pickling treatment in the absence of nitric acid are provided. The methods include the steps of cleaning the
5 pickled stainless steel with an alkaline composition to obtain clean steel, activating the clean steel with an activator composition to obtain activated steel, and passivating the activated steel with a passivating composition in the absence of nitric acid. In the preferred embodiment, the activator composition contains at least one activator, the activator having a significantly higher binding affinity for iron than for chromium as
10 evidenced by their metal complex formation constants.